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ABSTRACT

A group composed of 124 classroom teachers, reading teachers, and graduate students in reading specialization programs participated in a study that examined how teachers select and use information in judging students' probable performance in reading groups. Each subject read two case studies (one describing a boy with social problems but no reading problems, the other describing a boy with reading problems and no social difficulties) and rated whether the student described in each should be placed in a low, middle, or high reading group. After this rating, subjects were allowed to select one of five areas in which they would like to have additional information about the student. Following this they gave the student a second rating, requested information from another area, and completed a third rating. Results indicated that both initial ratings and initial information requests were related to type of case presented, that the patterns of information requested differed by problem type, and that final ratings and shifts in ratings were related to the positive or negative value of the information received. (Copies of the two cases are included.) (FL)

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Reading Grouping as Decision-Making: Selection and Effects of Cues

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Paper presented to the annual conference of the MidWestern Educational Research Association, Chicago, October 1982.

We greatly appreciate the efforts of Nora Hoover, Jo Ann Daly and Gloria McDonell and the several groups of participants in carrying out this study, Mary Ellen Sproull-Mitchell and Lucia Vegega in keypunching, John Endahl in data analysis, and Norma McGehee, Elinor Dulin, and Maggie Sharp in typing various versions of this report. Copies of this paper may be obtained by writing to Dr. Barbara Hutson at Northern Virginia Graduate Center, VPI&SU, 2990 Telestar Court, Falls Church, Virginia, 22042.

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Reading Grouping as Decision-Making: Selection and Effects of Cues

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Each day, classroom teachers make instructional decisions, often based on little information. Decisions such as tracking or grouping of students for instruction may have broad and long-term effects (Stern & Shavelson, 1981; Prawat, 1980). For this reason we need to know more about such decision-making. Studying what happens may also give us greater insight into what should happen and how we can facilitate effective decision-making.

A number of theoretical frameworks have been applied to examination of a cluster of related topics including classroom decision-making, instructional grouping and diagnosis. These topics, as they have typically been studied, have characteristic differences, yet important similarities. Classroom decision-making has often involved watching teachers in action, often after instructional groups have been formed, making minute-to-minute decisions, as inferred by an observer and perhaps clarified by later interview with the teacher about his/her plans. Some studies of classroom decision-making focusing on instructional grouping have involved simulated case studies and forced-choice categorization of students into groups. Some studies of diagnosis have followed a similar pattern and others have used much more complex case studies, not necessarily controlled for content.

Use of cues is a key element in all of these frameworks. Earlier reviews and studies of decision-making and problem-solving in other contexts (Shulman & Elstein, 1975) and recent analyses of diagnosis (Vinsonhaler, 1979) have given prominence to the selection and weighting of cues. Some

have examined not only the choices but the order of selection of cues. Yet there are relatively few studies explicitly analyzing the effects of selection and use of cues in making decisions about instructional grouping.

Rather than reviewing all of the research or theoretical perspectives applicable to this problem, we will focus on several recent studies that involve presentation of cues. Each contributes features that may be combined in a full-force assault on analysis of the selection and effects of cues and decisions-making. Some of the similarities and differences between studies are indicated in Table 1. Each study had other characteristics not analyzed here.

Niles and Borko (1982) presented to 27 classroom teachers and 40 student teachers 32 brief verbal descriptions of children, using every possible permutation of positive and negative information on each of five variables: classroom participation, social competence, classroom behavior, teaching achievement, and oral reading performance. Subjects were asked to place students into one of three categories--high, middle, or low reading groups. They were not, however, offered any choice of additional information after the initial brief paragraph. In placing students in reading groups, almost all participants used information about reading achievement scores and self-correction of errors during oral reading. Many used a nonacademic cue as well (most often class participation) (Borko & Niles, 1982).

Cadwell and Leary (1982), applying both a problem-solving frame and a prototype/categorization frame, asked 3 learning disabilities teacher consultants to rate 50 simulated cases. For each case, six types of information were available. On the first 25 cases subjects were free to ask for scores on any or all of 6 randomly generated variables: WISC-R IQ, WRAT reading, WRAT math, sex, SES, and problem behavior rating (ranging from "behavior

potentially dangerous to self and other children" to "no behavior problem.") During these cases subjects were asked to "think aloud," and were tape recorded. For the remaining cases they were provided with a written display of the 6 scores. Raters were asked to place each student in one of three categories: emotionally disturbed, learning disabled, or regular classroom. Cadwell and Leary reported that although the one subject whose responses they reported "did not always ask to see all the information, the requests that were made always followed the same order: behavior rating,IQ, reading, math, sex and SES; these last two variables, ses and SES were requested less frequently than the other information and played no role in the decision process." (p.7). Although results from the other two raters were not discussed, the order in which information was requested differed across subjects. Since only one rating was made for each subject, it was not possible to trace the sequential effects of cue selection.

Kamil analyzed the effects of cues and the sequences of their presentation. In the first study, discussed here, each rater was presented with 5 cases, told the grade level for each, and told that the student's teacher suspected a reading problem. For each case the rater was given a high, medium, or low value on one of 5 peices of information (math, decoding, word recognition comprehension on informal reading inventory, and IQ), and asked to judge the probablity that the student had a reading problem. The rater, on later trials, received separately, in counterbalanced order, each of the other pieces of information for that case and on each trial made another judgement. The whole process (25 ratings) was repeated in a second block of trials for the same 5 cases. Analysis focused upon the relative impact of each type of score upon judgements, and upon the effect of order of two key variables, IQ and score on an informal reading inventory. Kamil found that in both orders the second piece of information had far less effect than the first, especially if the score on the second bit of information was low. While this study yields information

about order of experimenter presented information, it tells little about what information participants would have chosen or the order in which they would have requested it.

Weinshank, on the other hand, did allow raters (8 reading specialists) to choose from an overwhelming amount of information "in the order normally followed when the subject worked with a real child." (1982, p. 37). A given rater might receive for each of three cases one or many possible items (101 topics, each available in any of 3 forms--a statement of weakness, a statement of strength, or an observation), as many as the rater chose to request in thirty minutes. Order and time of information request were recorded. Subjects then were given twenty minutes to write a diagnosis and another twenty minutes to write a remedial plan. The number of cues collected by a clinician ranged from 5 to 44. Cue selection was somewhat more consistent than the distinctly idiosyncratic and unreliable diagnostic and remedial statements. In addition, "thoroughness of collection had no apparent effect on diagnostic reliability" (1982, p. 43).

Although each of these studies has important contributions to make, each stops short of analyzing as fully as might be desired the types and order of information that subjects would choose in making decisions about instructional grouping and the effects of type and order (of information requested) upon raters' decisions. This is not an indictment of any of these studies, since this was not their central intent, but it does point out the need for more information about selection and effects of cues.

It seemed useful to combine useful features of studies from various traditions. Some features desirable in a study of cues are that the simple size be sufficient to allow reasonably stable estimates across subjects, that the set of cues in an initial case summary be relevant but of moderate size and that subjects be free to choose these cues in any order. It is

also desirable to assess ratings at more than one point, in order to relate the pattern of requests for cues to the pattern of ratings. One additional consideration is that while categorical data (placing students in various groups) are of interest, they rule out certain of the more powerful forms of data analysis.

With these specifications in mind, a new "puzzle form" (Shulman & Elstein, 1975) was developed for this study in order to analyze how teachers select and use information in judging students' probable performance in reading groups. The organization of this study permitted interpretation of responses in terms of decision paths. Some of the questions of greatest interest were:

1. Are ratings related to characteristics of the initial case summary?
2. What categories of information do raters request?
3. What patterns of information request are observed?
4. Are patterns of information request related to patterns of ratings?
5. What are the decision paths followed by raters?

Method

The sample for this study consisted of 124 classroom teachers, reading teachers, and graduate students in reading specialization programs at two universities. Responses were gathered from a total of six groups, beginning with 48 participants in a workshop at a conference of the International Reading Association. Differences by subgroup, role, and philosophy were not analyzed in this report. Only two subjects were male.

Subjects participated in groups of varying size, marking their information requests and ratings on individual response sheets. For each case they read a brief case summary and rated the student on a 1-10 point scale (on which

1-3 indicated a low reading group, 4-7 a middle group, and 8-10 a high group).[1] After this initial rating, subjects were allowed to select one of 5 topics on which they would like additional information. They were then provided with a one or two sentence description of the students' performance in that area but information in no other category. Next they rated the student again, requested information from one of the four remaining categories, and rated the student a third time. The procedure was repeated for a different case. Order and value of cues presented in initial cases was the same for each rater, but order of later cues varied widely, subject to individual control.

The materials used are shown in Table 2. For each case there was an initial case summary consisting of positive or negative information in 5 categories: classroom participation, social competence, classroom behavior, reading achievement and oral reading performance. There was also additional information available in each of these categories. All subjects saw the initial case summary for each case, but each saw only those two additional cues that they requested, and in the order that they requested. Although only two cases were presented, they were designed for maximum contrast between social information and reading information, between initial case summary and later information requested, and between cases. The initial case summaries were adapted from two "split cases" in the Borko and Niles (1982) study. For Steve the values in the initial case summary were---++ negative on all social indicators and positive on both reading measures. The information available for this case after the first rating, however, had values of +++--, qualifying in a negative direction the information initially received.

For example (Table 2) while the case summary had stated that "on the last group reading achievement test, he was found to be a year above grade level," the later information (viewed by only those who requested information

about reading achievement) stated that "Although Steve is a little above grade level in overall achievement, most children in his class are 1½ - 2 years above the norms."

David's profile was intended to be the obverse of Steve's, with +++ on initial social information and -- on initial reading information, followed by a - on any social information later requested and a + on any reading information. For example, it had initially been stated that David "seldom gets in trouble in school," but anyone requesting more information on classroom behavior was informed that "Though David seldom gets in trouble, that's because he's sneaky, not because he's good. When he misbehaves, he usually manages to shift the blame to someone else."

Data available for analysis thus included three ratings for each subject on each of two cases and two information requests by each of 124 raters on each of two cases. Information requests could be analyzed in terms of 5 specific categories of information or grouped as social information and reading information. In addition, information requests could be analyzed within an occasion (first request or second), or summed across occasions and/or cases. The fact that ratings were elicited after each additional bit of information was received also made it possible to analyze sequential patterns of information request and their relationships with raters' decisions about students' ability to perform in reading groups.

Results and Discussion

Results

1. Did ratings for the two cases differ?

Yes. The mean initial rating for Steve's case, based only on the case summary which suggested some social problems but no reading problems, was

higher (6.27) than the rating for David (2.24), whose case summary suggested reading problems but no social problems. In general, although ratings changed as the raters gathered new information, ratings for Steve remained higher than those for David. The difference between the two cases was significant (t=23.44, 246df, $p < .001$).

It was also observed that for these two "mixed" cases, with some positive and some negative information in the initial case summary, initial ratings often clustered near the boundaries of reading groups. In Steve's case, the most common initial ratings were 3, at the upper end of the low reading group, and 4, at the lower end of the middle reading group. In David's case, the most common initial ratings were 7, at the upper end of the middle reading group, and 8, at the lower end of the high group.

2. What kinds of information did raters request?

After reading the brief initial case study and rating the student, subjects were allowed to request any one of five specific categories of information. They received only the information they requested, rated the student a second time, requested a second category of information and rated the student a third time. Since only one item in each category was available for each case, the raters could not request information from the same category twice.

Across both cases there were more requests for reading information than for social information. The category of social information most frequently requested was classroom participation, within each case and across both cases. The differences were seen most sharply on first request and for the case in which reading problems were indicated early (Table 3).

For Steve's case, in which the summary suggested social problems, first requests for information were scattered across categories, with classroom participation, social competence,and reading achievement most common. Most of the second requests were for reading achievement or oral reading performance. For David's case very few initial requests were for social information. One fourth of the second requests for information were for classroom participation, but most were for reading achievement and oral reading performance.

3. What patterns of information request were found?

Since each individual had two opportunities to request information, it was possible to examine patterns of information search, and ultimately to examine whether the type and value of information received at one point influenced the type of information requested next.

The first step in this search was to group the five specific categories of information request into two: social and reading. In Steve's case a request for any of the three social categories (classroom participation, social competence, classroom behavior) yielded information somewhat more positive than in the initial case summary.

The four possible patterns of information request were to request social information first, then social a second time (SS), social followed by reading (SR), reading followed by social (RS), or reading on both occasions (RR). Because there were three categories of social information and only two categories of reading information, chance would have favored the SR and especially the SS patterns. For Steve's case the distribution of information request patterns was significantly different from chance ($\underline{\chi}^2 = 15.57$, 3 df, $\underline{p} < .01$). For David's case the distribution of information request patterns was even more sharply different from chance ($\underline{\chi}^2 = 236.22$, 3 df, $\underline{p} < .01$). The RR pattern, for example, would have been expected by chance only one time in eight but was in fact selected one time in two.

4. Were information request patterns related to ratings?

Yes. That was not a given. The design of this study opened many possible paths to subjects, a strategy that could spell disaster to a researcher's hopes of finding order. People did vary in their ratings and in their information requests, but there was pattern and apparently purpose to this behavior.

In these two cases the positive or negative value of the information received was related to overall shift in ratings (Table 4). For Steve, with an initial case summary configuration of ---for social and ++ for reading information, receipt of two bits of + social information was associated with a small positive overall shift. Receipt of combinations of + social and then - reading information or - reading then + social were associated with moderate negative overall shifts, and receipt of two bits of negative information on reading was associated with a larger negative shift. For David, with an initial case profile of +++--, a -- pattern of social information receipt was associated with a small negative overall shift, -+ or +- patterns were associated with small positive or near zero shifts, and a ++ pattern of reading information was related to a larger positive shift.

A sequential analysis (Figure 1 and Table 4) makes it possible to see more clearly the effects of information choice. Raters were categorized in terms of the information request patterns they had used. All four groups were quite similar in terms of their first rating, based on the initial case study. After the first information was requested and received, however, those who received social information (+) increased in their estimation of Steve's ability to function in reading groups, and those who received reading information (-) decreased even more sharply in their evaluation.

After the second bit of information was received, ratings by those who received a second positive bit of social information showed a slight (near zero) increase, while ratings by those who received a second negative bit of reading information continued to decline, though not so sharply as after the first negative reading information. Those who switched information types on the second request received information that moderated in a positive or negative direction their previous estimates, resulting in both cases in a small negative overall shift. The negative reading information appeared to have a somewhat greater impact on ratings of reading performance than did the positive social information, though it is possible that the opposite would have been true if subjects had been asked to rate expected social adjustment.

The picture for David is in general similar to but less well defined than that for Steve. Initial ratings (Figure 2) were a little more scattered than for David, but did not appear to be clearly related to the type of information raters chose. Those who received twopositive bits of reading information increased markedly in their ratings. Ratings for those who received + reading followed by - social increased then decreased, ending about where they began. Raters with a -+ pattern showed a barely perceptible decrease followed by a moderate increase, ending in a small positive overall increase, ending at essentially the same point as all others except those who received two positive bits of information about reading. The group that performed least like its counterpart in Steve's case was the -- group. Rather than showing two segments of decline, this group first increased, then decreased, following the path of the +- group. Only 4 of the 124 subjects, though, followed this path, and their influence should not be overweighted. The

influence of the positive (reading) information had at each point the effect that would be expected but the influence of the negative (social) information seemed less predictable. Introduction of negative social information at the second stage of the RS pattern was followed by a decrease, but the effect in the first stage of the SR pattern was minimal and in the first portion of the SS pattern the following rating was positive.

[The design of this study also permits a Bayesian analysis, examining the benefit of taking a subject's earlier ratings into account in predicting that subject's ratings. That analysis is not included in this report.]

5. What were the decision paths?

A way of summarizing graphically a great deal of information is to depict these findings as a decision tree (Figure 3),to indicate the paths most often followed, and the final ratings associated with each path. The first bifurcation is the initial request for social or reading information. In Steve's case, with an apparent social problem, 67% of the raters requested social information (positive in this case); on the second request this group subdivided, with 31% of the total group following an SS pattern and 36% an SR pattern. The 33 % who had first requested reading information divided on second request evenly, with 16% following an RS pattern and 17% an RR pattern. Final ratings were highest (6.97) for those who followed an SS pattern, intermediate for SR and RS patterns, and lowest (4.05) for an RR pattern.

In David's case, with an apparent reading problem, the large majority (85%) first chose reading information, which gave a more positive picture. The majority of this group next chose another bit of reading information, with 36% of the total group following an RS pattern and 49% following an RR pattern. Within the minority (14%) who first chose social information, 3% followed an SS pattern and 11% followed an SR pattern.

Ratings were related to information choice, very clearly in the first case, a little less so in the second. It appears that in choosing information in cases like these, most raters are most strongly influenced by the type of problem suggested in the brief preliminary case summary, and seek information first about the perceived problem. Some raters at that first point and others after they receive further information (as in David's case) decide that the social is not so much of a problem as it appears, and may also be influenced by the nature of the decision to be made. In this case the problem is to estimate performance in a reading group. Although we have no direct evidence on that point, it is possible that if raters had been asked to estimate social adjustment, not only the ratings but the pattern of information requests would have differed.

Conclusions and Conjectures

Let us first review briefly the questions that motivated this study and the answers received.

1. Are ratings related to characteristics of the initial case study? Yes. The initial ratings for the case designed to be positive on reading were higher than for the case designed to be negative on reading. Even later ratings, after exposure to information that qualified the information in the initial summary, continued to be higher for the first case than for the second.

2. What categories of information do raters request? The specific categories of information requested varied across cases. The categories most often requested were reading achievement (32%) and oral reading performance (27%). Within Steve's case,distribution across categories was relatively even, except for classroom behavior, which was least often requested. Within David's case, however, reading achievement and oral reading performance were requested far more often than any of the categories of social information.

3. What patterns of information request are observed? Across both cases, in decreasing order of frequency, the information request patterns were Reading-Reading, Reading-Social, Social-Reading, and Social-Social. The patterns, however, varied with case type. Where the initial case summary indicated no reading problems, SR and SS information request patterns were common, but where the initial case summary suggested reading problems, RR and RS patterns were strongly favored. Within each case the information request patterns differed sharply from those that would be expected by chance.

4. Are patterns of information request related to patterns of ratings? Within each case the final ratings differed for those who used different information search patterns. This was evident in the final ratings and the overall shifts in ratings (from first to third ratings). The relationship was most striking, however, when sequential changes over the three ratings are related not only to characteristics of the initial case study, but to the sequential pattern of information requests. In this study, information request and value of information were linked within case but contrasted across cases. Following receipt of positive information, especially when that information was highly pertinent to the judgement to be made, ratings

tended to be more positive than before; following receipt of negative information, ratings tended to be lower.

5. What are the decision paths followed by raters? For the case with no initially apparent reading problems, 67% first requested social information and received positive social information. This group split on the second request, approximately half requesting another item of social information and half reading information. The third of the group who first requested reading information for this case similarly split evenly on the type of information requested next. On the second case, 85% requested reading information first; nearly three-fifths of the this group requested reading information on the second occasion as well.

It is clear that the information requested and received was related to both interim and final ratings. There are limits, though, to our ability to define that information. In constructing cases for this exploratory study of a new data-gathering paradigm in order to study information requests, we attempted to create two cases with maximal contrast, roughly following the lines of the two extreme cases in an earlier study by Niles and Borko. The two cases are mirror images of one another in terms of postive/negative value of information. Value and content are confounded within a given case, however, in that if an individual requested information from category a, classroom participation, (s)he received social information that was presented in only one value for a given case.

While content, as related to a perceived problem and a perceived task, was probably the major influence in selecting a given category of information, the value, perhaps interacting with type of information, seemed to be more of a factor in the following rating. For example, if the two cases were combined, half the groups who first requested reading increased and half decreased their subequent rating. But if the same data are examined in terms of value, all but one of the eight groups behaved as would have been predicted by knowledge of the value rather than the content of the information.

Let us speculate on other factors. The muted effect of social information in the second case may suggest that expected relevance of the information to the judgement to be made and the students' place on that scale of ability, as perceived by the rater prior to that point, affect ratings. For example, if a student was already placed in the lowest reading group, would anything short of extreme negative information about reading have the effect of lowering ratings?

The scale itself could place limits, though in this case only a few raters used the extreme ratings early in a way that would have masked the effects of further negative or positive information.

Although the stated task was the same for all subjects, the perceived task and the perceived relevance of various kinds of information for that purpose may differ. One might see only reading data as relevant and, being satisfied from the information in the case summary that this child has a problem, ask out of simple curiousity about the social behavior. Or, given that reading instruction occurs in groups, where people must develop a cohesive group structure, another may consider that a student's social "fit" in a reading group and his/her own ability to adjust to new people and new demands are relevant factors.

It seems likely (and a proper subject for further investigation) that within some moderate range of variability, an information category of secondary relevance to a given kind of judgement exerts for most people little influence, but when that behavior reaches some negative point on the scale or some (perhaps more extreme) positive point, the secondary factor exerts a greater influence on judgement. Enough of speculation for the moment. The design of this study can easily be adapted to study of many of those issues, given sufficient subjects willing to share with us their thinking.

We will not at this point attempt to relate these findings to the broader literature, but it seems appropriate to make some comparisons to those studies mentioned earlier, with which this study shares certain features. Although the present study used only 2 of the 32 cases used in the Niles and Borko (1982) study, it confirmed that in judgements of reading group placement, raters appear to be influenced by positive or negative information about reading. In fact, this study shows raters seeking out such information, though the rate of such cue seeking varies with case type.

Like Cadwell and Leary (1982) this study found that subjects differed in the order in which they requested information in various categories, but the present study was designed to allow fuller study of order of cue seeking and its effects. This study employed far more raters but far fewer cases than did Cadwell and Leary's study.

This study provided more bits of information and allowed more subject control, but did not control order of presentation of diagnostic cues as Kamil did. The analysis presented here did not as specifically analyze the effect of information presentation order upon ratings, though a rich base of information sequentially organized invites such analysis.

This study presented far less variety of information to far more raters than the Weinshank study. The clear patterns found in this study, as contrasted with the discouraging results of the Weinshank study and others in the Vinsonhaler group, though, raise issues of research strategy. When we know as little as we now do about the decision-making process in

dianosis or instructional grouping, is it productive to use such an open-ended paradign as Weinshank's (in which the odds against matching one of many information requests to one of many diagnostic statements and that in turn to one of many remedial suggestions are incredible)? Or is it more productive, even at the risk of oversimplifying a complex phenomenon, to present a relevant but more manageable set of alternatives, in order to capture the broader patterns that can later be analyzed in greater detail?

To sum up the findings of this study, we can state that both initial ratings and intitial information requests are related to type of case presented, that the patterns of information request differ by problem type, and that final ratings and shifts in ratings are related to the positive or negative value of the information received. We can reasonably suggest that content of the information and perceived relevance to the task at hand also affect weighting of information, and that a second dose of information of the same value and type, as in SS and RR patterns, will usually have the same direction but less force than the first. We can only speculate about the effect of the type of judgement task and other complexities such as the possible interaction of student's perceived place on the scale prior to the new information, primary/secondary relevance of the new information, and extremity of the new information.

The research strategy devised for this study appears to be productive in that it allowed a glimpse of some clear patterns of information request and their relations to classroom decisions about reading grouping. The structure can easily be adapted to address many of the issues raised in this discussion.

Table 1

Characteristics of Selected Studies of Cues

Characteristics of Study	Niles & Borko (1982)	Cadwell & Leary (1982)	Kamil (1982)	Weinshank (1982)	Borko & Cadwell (1982)	Horvath, Kass & Farrell (1980)	Hurson & Niles (1980)
Design							
number of cases presented per rater	32	50[a]	5x2 (X 5)[b]	3	32	310	2
number of raters	67	1[a]	17	8	41	1	124
type of response data (categorical, ordinal, interval)	c	c	i	c	i	i	i
total number of ratings analyzed	2144	50[a]	850	304	1312	310	744
Cues in Initial Case Summary							
number of cues in initial case summary	5	0	1	3	6	many	5
values of cues in initial case summary	+/-	n.a.	hi/med/lo	?	+/-	ranged	+/-
values of cues controlled across cases	yes	n.a.	yes	n.a.	yes	no	yes
forms of cues (numerical, brief verbal, case files)	bv	n	n	c	bv	c	bv
Cues after Initial Case Summary							
number of cues per case available after initial case summary	0	6	4	22 types[c]	0	0	5
number of cue presentations per case after case summary	n.a.	1-6	4	20-30	n.a.	n.a.	2
values of cues after initial case summary	n.a.	varied[d]	hi/med/lo	W/S/O[e]	n.a.	n.a.	+/-
Information Requests							
Information Requests Permitted	no	yes	no	yes	no	no	yes
order similar or different across subjects	n.a.	d	n.a.	d	n.a.	n.a.	d
order controlled by experimenter or by subject	n.a.	s	n.a.	s	n.a.	n.a.	s
total number of cue requests analyzed	n.a.	?	n.a.	640	n.a.	n.a.	496
Analysis of Information Requests							
analysis of frequency of info-request types	n.a.	yes[f]	n.a.	yes	n.a.	n.a.	yes
analysis of order of info-request types	n.a.	yes	n.a.	yes	n.a.	n.a.	yes
analysis of effects of order of request	n.a.	no	n.a.	no	n.a.	n.a.	yes

[a] Three raters participated but results are reported for only one.
[b] Five cases for which a different one of 5 pieces of information was presented on each of 5 trials in each of two blocks.
[c] Within each of these types were many more specific cues.
[d] IQ, problem behavior, reading achievement, and math achievement were presented as randomly distributed scores, SES and sex and dichotomous.
[e] Each written diagnostic statement was identified as weakness, strength, or observation in one of 101 categories.
[f] Summarized verbally only in passing.

TABLE 2

INITIAL CASE SUMMARIES AND LATER INFORMATION AVAILABLE

STEVE

Initial Case Summary

Steve doesn't always join in class activities. He doesn't make new friends easily and often breaks class rules. On the last group reading achievement test, he was found to be a year above grade level. The miscues he makes during oral reading don't usually change the meaning of the sentence.

Information Available

a. Classroom Particitpation: When Steve joins in class activities he is often a leader, well accepted by others.

b. Social Competence: Steve is very close to a few old friends, yet will include newcomers in his group's activities.

c. Classroom Behavior: When Steve breaks rules, they're usually small things that make you laugh instead of punishing him.

d. Reading Achievement Test: Although Steve is a little above grade level in overall reading achievement, most children in this class are 1½ - 2 years above the norms.

e. Oral Reading Performance: In the more difficult passages, Steve seems to forget all about meaning and tries to sound out unknown words though his phonic skills need work.

DAVID

Initial Case Summary

David participates cheerfully in class activities and seems eager to get along well with other children. He seldom gets in trouble in school. On the last reading achievement test, he was found to be a year below grade level. In his oral reading he usually does not correct himself when a word he is reading doesn't make sense.

Information Available

a. Classroom Participation: Although David is willing to participate, he doesn't always follow directions, so he gets himself and others confused.

b. Social Competence: David likes other children and wants to be part of the group, but some days they won't let him in, or let him in only to play the "goat".

c. Classroom Behavior: Though David seldom gets in trouble, that's because he's sneaky, not because he's good. When he misbehaves, he usually manages to shift the blame to someone else.

d. Reading Achievement Test: Although David's score on the last reading achievement test was a little below grade level, you've found that tests often test low, making students look worse than they actually are.

e. Oral Reading Performance: While David doesn't always correct his miscues during oral reading, he may silently correct himself, since he usually can answer a higher percentage of comprehension questions.

Table 3

Frequency of Choice of Each Information Category

	Steve			David			Both Cases		
	1st Choice	2nd Choice	Total	1st Choice	2nd Choice	Total	1st Choice	2nd Choice	Total
Classroom Participation	23	31	54	8	31	39	31	62	93
Social Competence	16	32	48	6	11	17	22	43	65
Classroom Behavior	19	20	39	3	8	11	22	28	50
Reading Achievement	31	27	58	67	31	98	98	58	156
Oral Reading Performance	35	14	49	40	43	83	75	57	132
Total	(124)	(124)	(248)	(124)	(124)	(248)	(248)	(248)	(496)

Table 4

Mean Ratings by Subjects with Different Information Choice Patterns

Steve)---++)

Patterns	Valence	n	1st Rating	2nd Rating	3rd Rating
Social-social	(++)	(38)	6.37	6.92	6.97
Social-reading	(+-)	(45)	6.13	6.93	5.13
Reading-social	(-+)	(20)	6.50	4.70	5.25
Reading-reading	(--)	(21)	6.19	4.67	4.05
Total		(124)	6.27	6.19	5.52

Mean shift in ratings	1st-2nd	2nd-3rd	1st-3rd
Social-social	+0.55	+0.05	+0.61
Social-reading	+0.80	-1.80	-1.00
Reading-social	-1.80	+0.55	-1.25
Reading-reading	-1.52	-0.62	-2.14
Total	0.08	0.67	-0.75

Mean Ratings by Subjects with Different Information Choice Patterns

David (+++--)

Patterns	Valence	n	1st Rating	2nd Rating	3rd Rating
Social-social	(--)	(4)	2.75	3.25	2.50
Social-reading	(-+)	(14)	2.00	1.93	2.64
Reading-social	(+-)	(45)	2.49	3.22	2.51
Reading-reading	(++)	(61)	2.08	3.20	4.11
Total		(124)	2.24	3.06	3.31

Mean shift in ratings	1st-2nd	2nd-3rd	1st-3rd
Social-social	+0.50	-0.75	-0.25
social-reading	-0.07	+0.71	+0.64
Reading-social	+0.73	-0.71	+0.02
Reading-reading	+1.12	+0.91	+2.03
Total	+0.82	+0.25	+1.07

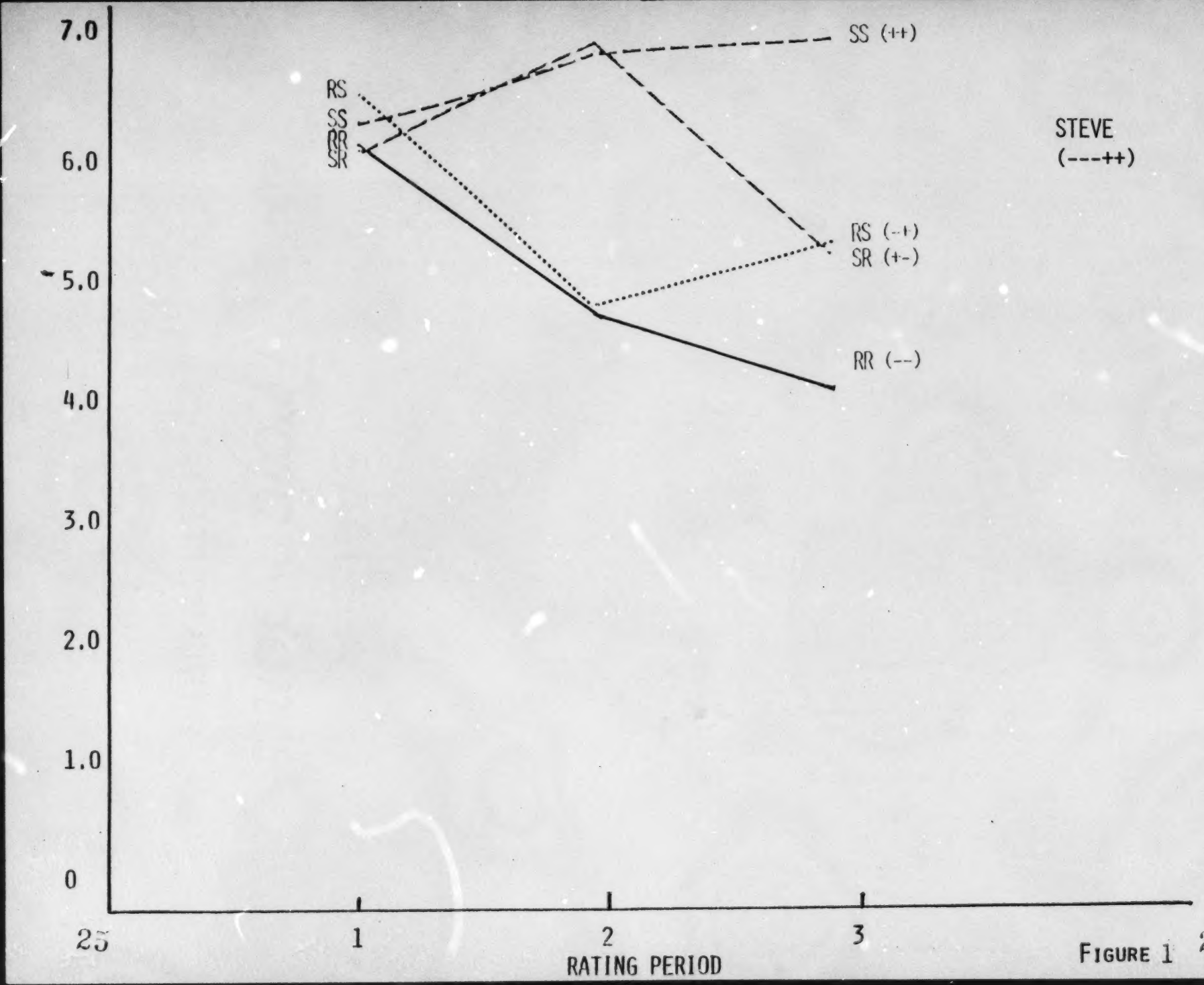

7.0
6.0
5.0
4.0
3.0
2.0
1.0
0
SS (++)
RS
SS
RR
SR
STEVE
(---++)
RS (-+)
SR (+-)
RR (--)
1
2
3
RATING PERIOD

FIGURE 1

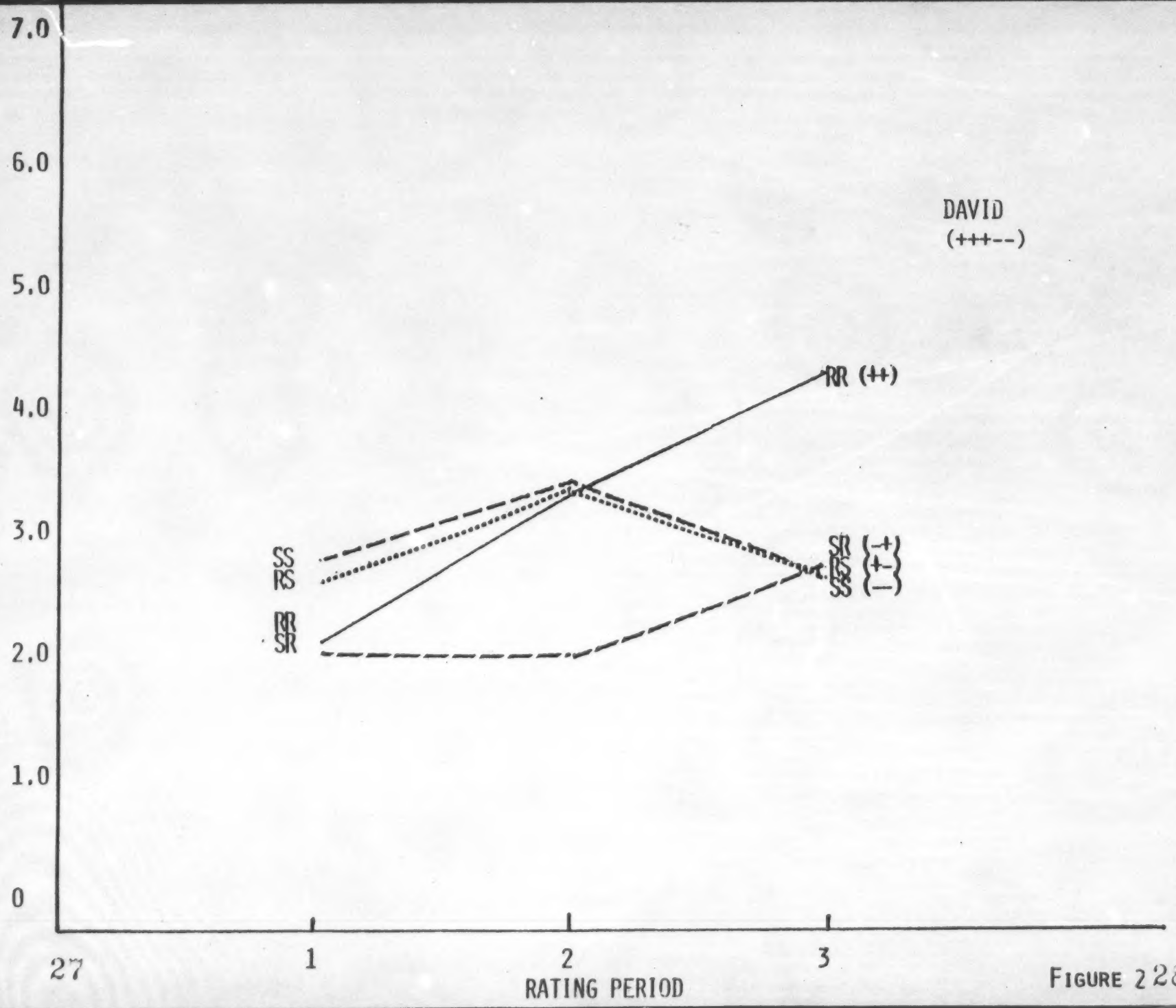
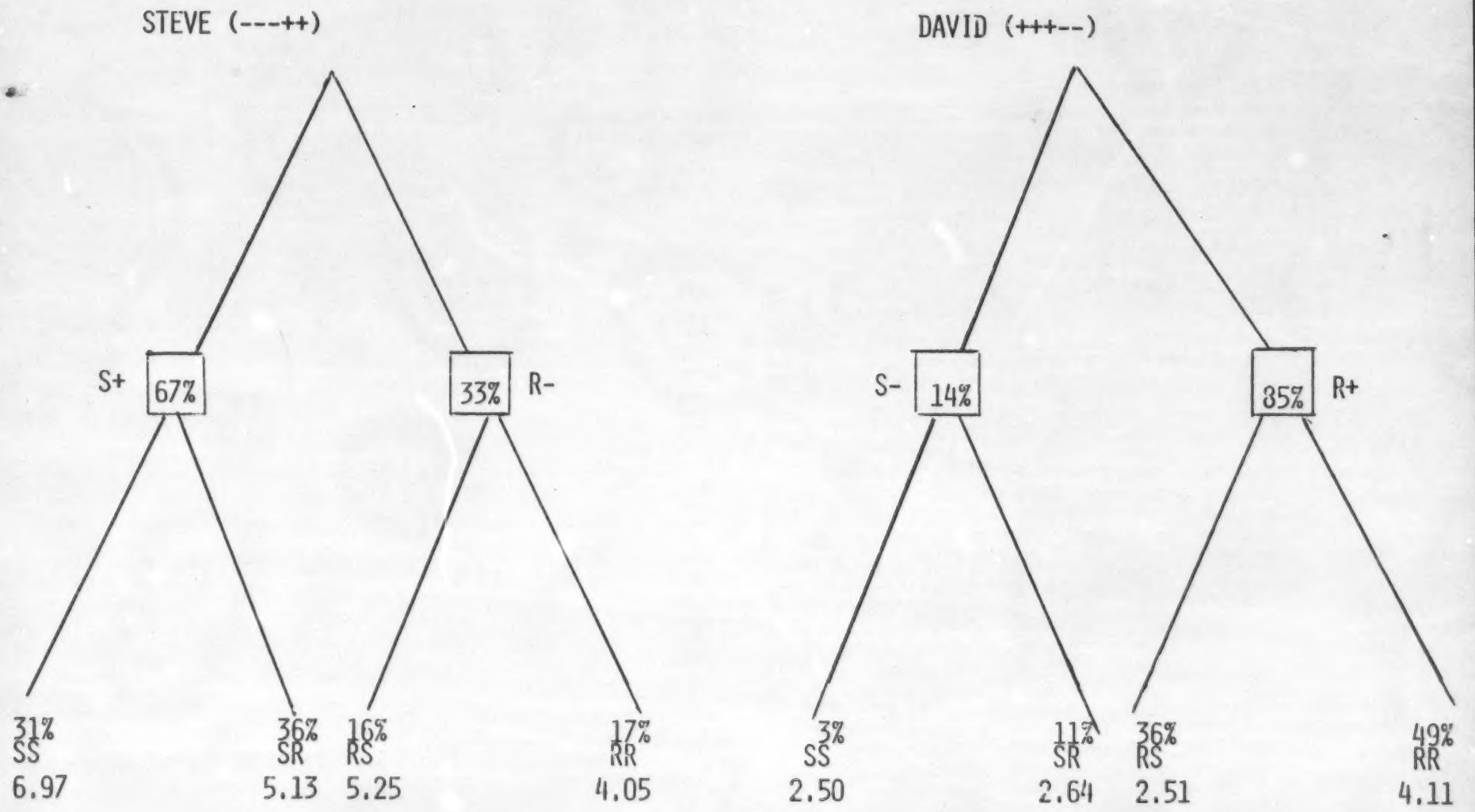


FIGURE 228

DECISION PATHS FOR THE TWO CASES

PERCENTAGE OF INFORMATION REQUESTS AT EACH CHOICEPOINT



MEAN FINAL RATINGS

FIGURE 3

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